initiate fall migration. We will discuss findings from the first year of this 2-yr study.

REPRODUCTIVE AND PROVISIONING BEHAVIOR OF THE AMERICAN KESTREL IN EASTERN TEXAS

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In eastern Texas, American kestrels (*Falco sparverius*) are uncommon breeding residents presumably of the southeastern coastal plain subspecies *F. s. paulus,* which is currently listed as threatened in Florida. The apparent rarity of the breeding population and the population declines in the eastern portion of the subspecies' range warranted our investigation of American kestrel status and breeding behavior in eastern Texas from March 1992 to the present. Kestrels are opportunistic foragers; their diet consists of a wide range of prey items, including arthropods, small rodents, birds and reptiles, and is highly dependent upon location and season. Our data indicate that the percentage of herptiles in the diet of forest residents is much higher than that indicated in the literature for kestrels in other areas of the country. Although some kestrels may feed exclusively on arthropods in winter, breeding kestrels in eastern Texas appear to be nutritionally or energetically dependent on vertebrate prey. In most kestrel pairs, females become sedentary within a small area around the cavity tree two or more weeks before commencing incubation. The female remains largely dependent upon her mate for food from this time until approximately 2 wk after the eggs hatch, when she will begin foraging, assisting the male in provisioning the young. We have found that kestrels readily capture green anoles (*Anolis carolinensis*), which are quite abundant during the breeding season. Field observations to date indicate that eastern Texas resident kestrels rely almost exclusively upon a lizard prey base during the provisioning portion of the breeding cycle.

ADAPTIVE RADIATION IN DIURNAL BIRDS OF PREY ON THE BASIS OF THE JAW APPARATUS

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The results of morpho-functional analysis of the jaw apparatus in the Falconiformes are discussed. The particularities of structure and functions of the jaw in different groups of raptors are considered. Adaptive interpretations are presented. Factors perceived to influence the formation of specific groups of birds of prey are presented.Vultures are perhaps a very ancient group, but evolution of their jaw apparatus could not originate from accipitrid-like ancestors. It is not possible to connect the specific morphological adaptations in the Cathartidae jaw and hyoid apparatus with their foraging techniques. More probable, Cathartidae peculiarities originate from a more closely tied ancestor who was a near-water bird with a low jaw and a relatively long bill. New World vultures are not connected with other Falconiformes in their origin. Perhaps vultures should be more closely connected to Procellariformes and Pelicaniformes. Scavenging was not a major factor in the evolution of Accipitridae. This group evolved into relatively generalized, active woodland raptor life forms.

HOME-RANGE AND FORAGING BEHAVIOR OF THE FERRUGINOUS HAWK IN SOUTHCENTRAL WASHINGTON

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We studied movements of six adult male ferruginous hawks (*Buteo regalis*) nesting on and adjacent to the U.S. Department of Energy's Hanford Site in southcentral Washington, from May through August 1994, using radiotelemetry. Observations were recorded during all daylight hours to determine daily foraging activity. In addition to foraging, we noted the number of prey deliveries to nests, prey sizes delivered, and the distances prey items were carried to nest sites. Preliminary results indicate home ranges of males nesting on the Hanford Site were similar to those of males nesting off-site. Males nesting both on and off of the Hanford Site used agricultural fields for foraging. All males captured and delivered a variety of small- and medium-sized prey items (i.e., small = mice, shrews, voles; medium = ground squirrels and pocket gophers) to the nest, but none were observed capturing or delivering any large prey items such as jackrabbits.

ASSESSING ABUNDANCE AND NESTING SUCCESS OF BENCHLAND RAPTORS IN THE SNAKE RIVER BIRDS OF PREY NATIONAL CONSERVATION AREA— AN EVALUATION OF METHODS

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From 1991–94, we assessed relative abundance and nesting success of ferruginous hawks (*Buteo regalis*), northern harriers (*Circus cyaneus*), burrowing owls (*Speotyto cunicularia*), and short-eared owls (*Asio flammeus*) in the Snake River Birds of Prey National Conservation Area (NCA) in southwestern Idaho. This was the first attempt to monitor these species in the NCA's desert uplands. To assess relative abundance, we searched randomly selected plots to locate occupied nesting areas using four sampling methods: variable circular plots, line transects, and quadrats of two sizes. To assess reproductive success, we tried to de-